WHAT IS CLAIMED IS:

1.   A system for managing a network comprising:

a processor configured to manage at least one network element associated with the network;

a memory device coupled to the processor and configured to store an application program; and

one or more repositories configured to communicate with the network, where at least one repository is configured to maintain an object-oriented information model, the information model including at least one managed entity data structure for describing the network element as a physical entity represented by one or more physical objects,

wherein the at least one managed entity data structure is used to map different characteristics of different network elements into one or more vendor-independent data models.

2.   The system of claim 2 wherein the at least one managed entity data structure further describes the network element a logical entity represented by one or more logical objects.

3.   The system of claim 1 wherein the at least one managed entity data structure further describes a logical characteristic for the network element as one or more logical characteristic classes.

4.   The system of claim 1 wherein the at least one managed entity data structure further describes a composition of the network element as one or more composition classes.

5.   The system of claim 1 wherein the at least one managed entity data structure further describes equivalent physical capabilities with at least one other different network element as one or more equivalent physical capabilities mappings.

6.   The system of claim 1 wherein the at least one managed entity data structure further describes equivalent logical capabilities with an implementation of at least one other different network element as one or more equivalent logical capabilities mappings.

7.   The system of claim 1 wherein the at least one managed entity data structure further describes a link between a logical capability and hardware for performing the logical capability as one or more hardware linkage mappings.

8.   The system of claim 1 wherein the at least one managed entity data structure further describes at least one link between different logical features and vendor-specific commands as one or more vendor-specific mappings.

9.   The system of claim 1 wherein the application program is configured to solicit information from at least two different network elements.

10.   The system of claim 9 wherein one of the at least two different network elements is associated with a command line interface programming model and another of

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the at least two different network elements is associated with a simple network management protocol programming model.

11.   A method for managing a network comprising:

forming a first representation of a network element as a physical entity in an information model, the first representation having a form independent of an implementation defined by a vendor; and

mapping a portion of the first representation from the information model to a second representation in a vendor-independent data model residing in a first repository, the second representation having a form suitable for use with the first repository.

12.   The method of claim 11 wherein the first representation further represents the network element as a logical entity.

13.   The method of claim 11 wherein forming the first representation in the information model further comprises:

abstracting a characteristic from one or more different network elements; and

mapping the abstracted characteristic to the information model.

14.   The method of claim 13 wherein the characteristic relates to a programming model of the one or more different network elements.

15.   The method of claim 11 further comprising mapping the second representation into a third representation in a vendor-dependent data model, wherein the third representation is optimized for implementing the network element.

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16.   The method of claim 15 wherein the third representation is in a form for implementing the network element as a specific device as defined by the vendor.

17.   The method of claim 11 wherein the first repository is a relational database.

18.   The method of claim 11 further comprising mapping another portion of the first representation from the information model to another vendor-independent data model residing in a second repository.

19.   The method of claim 18 wherein the second repository is a directory.

20.   A method for obtaining information from different devices in a network comprising:

receiving data representing the information from each of the different devices, where the data is in a specific form relating to each of the different devices; and

assigning the data from each of the different devices to one or more entities as defined by an information model.

21.   The method of claim 20 wherein assigning the data further comprises:

preserving a semantic of the received data;

comparing received data against one or more managed entities; and

transforming the data into a common representation.

22.   The method of claim 21 further comprising using the common representation of the data to monitor the performance of the network.

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23.   The method of claim 21 wherein transforming the data into a common representation is performed by a mediation layer.

24.   The method of claim 20 further comprising grouping the data from each of the different devices using an adaptation layer before assigning to one or more entities.

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